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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/064,852   | 08/23/2002  | Scott R. Parent      | 08EB3121-2          | 4590             |
| 23413  | 7590        | 05/21/2004           | EXAMINER            |                  |
| CANTOR COLBURN, LLP<br>55 GRIFFIN ROAD SOUTH<br>BLOOMFIELD, CT 06002 |             |                      | JARRETT, RYAN A     |                  |
|  |             |                      | ART UNIT            | PAPER NUMBER     |
|  |             |                      | 2125                | 6                |
| DATE MAILED: 05/21/2004  |             |                      |                     |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/064,852

Applicant(s)

PARENT ET AL.

Examiner

Ryan A. Jarrett

Art Unit

2125

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 23 August 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-22 and 24-30 is/are rejected.
- 7) ☒ Claim(s) 8 and 23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 4.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 3, 16, and 30 are objected to because of the following informalities:

Claim 3 recites the limitation "said driving" in line 1. There is insufficient antecedent basis for this limitation in the claim. This limitation should be changed to "said tuning".

Claim 16 recites the limitation "tuning" in line 12. This limitation is redundant with respect to the "adaptation process" claimed in line 14. Therefore, the limitation "tuning" should be changed to "running".

Claim 30 recites the limitation "said driving" in line 7. There is insufficient antecedent basis for this limitation in the claim. This limitation should be changed to "said tuning".

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 7, 15, and 22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable

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one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The specification does not describe what the “operator response actions” and “time to respond” are in response to.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 7, 15, and 22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 7, 15, and 22 generally recite “tracking operator response actions and time to respond”. However, it is unclear in the claims what the operator response actions and time to respond are in response to.

### ***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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7. Claims 1-6, 9, 10, 12, 16-21 and 24-30 are rejected under 35 U.S.C. 102(e) as being anticipated by Riley et al. US 2002/0107604. Riley et al. discloses a method, system, and a storage medium encoded with a computer program for enhancing process control, the method comprising: initiating a manufacturing process to create a product, wherein said initiating includes setting a control on a machine in response to said initial system model (e.g., Fig. 15 #1510, [0073]-[0077]); and tuning said manufacturing process in response to the initial system model, said tuning comprising: running said machine in response to the initial system model (e.g., Fig. 15 #1510, [0073]-[0077]); monitoring a primary output parameter of said product (e.g., Fig. 15 #1520); and performing an adaptation process while said machine is running, the adaptation process including: adjusting said control on the machine (e.g., Fig. 15 #1540); updating said initial system model to define an updated system model in response to said adjusting said control (e.g., Fig. 15 #1560); and running said machine in response to said updated system model (e.g., [0095]-[0102]);

wherein said adaptation process is initiated in response to said primary output parameter being outside of a selected primary output parameter value range; monitoring a secondary output parameter of said product; and alerting an operator if said secondary output parameter is outside of a selected secondary output parameter value range; wherein said monitoring a secondary output parameter includes displaying a current value for said secondary output parameter; wherein said alerting includes recommending a corrective action to said operator (e.g., [0030]-[0032], [0044], [0047], [0078]-[0080], [0095], [0097]);

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further comprising creating a process control report; wherein the process control report includes production data and yield loss data (e.g. [0078]-[0090], [0185]).

Claims 25-29 are clearly anticipated (e.g., Figs. 3-14).

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 7, 11, 13-15, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Riley et al. as applied to claims 1, 9, and 16 above, and further in view of Official Notice. Riley et al. does not explicitly disclose that the process control report includes downtime data, system maintenance data, change order data, and operator response tracking data. However, Examiner takes Official Notice that it is well known to incorporate this data into a process control report for obvious and well-established reasons. So it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the process control report of Riley et al. to include these features.

***Allowable Subject Matter***

10. Claims 8 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art fails to teach or fairly suggest creating a second system model that is a copy of an initial system model that was used on a first manufacturing machine: initiating a second manufacturing process on a second manufacturing machine to create the same type of product that was manufactured on the first machine, wherein the initiating of the second manufacturing process includes setting a control on the second machine in response to an input value included in the second system model; and tuning said second manufacturing process in response to the second system model, in combination with the remaining features and elements of the claimed invention.

Riley et al. does teach that an initial model, or control thread, can be used to establish initial settings on a machine for a current wafer lot. However, the initial model, or control thread, is only used when there have been one or more previous wafer lots that have been processed under the exact same conditions as the current wafer lot ([0077]). These conditions include the **current processing tool**, current operation, product code, and previous processing step ([0075]). Thus, in Riley et al., the same initial model can only be copied for a second product when that second product is processed on the **same** machine as that of a first product. In the applicant's invention, the initial model can be copied to a second, different machine.

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***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Mozumder et al. U.S. Patent No. 5,408,405

Pasadyn et al. U.S. Patent No. 6,725,121

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan A. Jarrett whose telephone number is (703) 308-4739. The examiner can normally be reached on 10:00-6:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Picard can be reached on (703) 308-0538. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



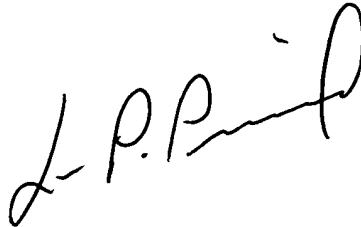
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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ryan A. Jarrett  
Examiner  
Art Unit 2125

5/14/04



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